

## CLAIMS

What is claimed is:

1 1. A method for allowing a porthole engine to deliver unrequested content to users that  
2 access requested content through the porthole engine, the method comprising the steps  
3 of:  
4 receiving, from a browser executing on a client, an initial request for requested  
5 content;  
6 wherein said initial request is received at said porthole engine;  
7 wherein said client is connected to a network through said porthole engine;  
8 wherein said requested content resides on an origin server located separate  
9 from said porthole engine on said network; and  
10 said porthole engine responding to said initial request by sending data to said client  
11 that causes said requested content and said unrequested content to appear on a  
12 display screen of said client.

1 2. The method of Claim 1 wherein web page content of said requested content is  
2 modified to encapsulate said requested content within a paneled frame.

1 3. The method of Claim 1 wherein web page content of said requested content is  
2 modified to reserve space in the web page to display said unrequested content.

1 4. The method of Claim 3 wherein the space reserved in the web page is selected from a  
2 group consisting of:  
3 the top of the web page;

4 the bottom of the web page; and  
5 a combination of the top of the web page and the bottom of the web page.

1 5. The method of Claim 1 wherein web page content of said requested content is  
2 modified to pop-up one or more display windows to display said unrequested content.

1 6. The method of Claim 1 wherein web page content of said requested content is  
2 modified to replace a portion of said requested content with the unrequested content.

1 7. The method of Claim 1 wherein:  
2 said requested content appears on a first portion of a content display region of  
3 said browser; and  
4 said unrequested content appears on a second portion of said content display  
5 region of said browser.

1 8. The method of Claim 1 wherein:  
2 said requested content appears on a first display window of said client; and  
3 said unrequested content appears on a second display window of said client.

1 9. The method of Claim 1 wherein said porthole engine determines the format in which  
2 to display said requested content and said unrequested content based on one or more  
3 factors including at least one of differences in browsers, components of requested web  
4 pages, and versions of the browsers.

1 10. The method of Claim 1 wherein the step of sending data to said client includes the  
2 step of:  
3 sending frame data to said client;  
4 wherein said frame data defines a plurality of frames;  
5 wherein said plurality of frames includes a first frame and one or more other  
6 frames;  
7 wherein said frame data further specifies that said requested content is to be  
8 displayed in said first frame, and that said unrequested content is to be  
9 displayed in said one or more other frames.

1 11. The method of Claim 10 further comprising the steps of:  
2 the porthole engine receiving a series of subsequent requests from the browser  
3 in response to the browser decoding said frame data, said series of  
4 subsequent requests including a second request for said requested  
5 content; and  
6 the porthole engine responding to said second request for said requested  
7 content by requesting said requested content from said origin server  
8 and delivering said requested content to said browser.

1 12. The method of Claim 11 wherein said porthole engine determines that said second  
2 request for said requested content is not an initial request for said requested content by  
3 using information contained in the URL associated with said initial request and with  
4 said second request.



1 18. The method of Claim 17 wherein the information about the particular user is selected  
2 from a group consisting of:  
3 information available to owners of the porthole engine;  
4 information about the requested content; and  
5 a combination of the information available to the owners of the porthole  
6 engine and the information about the requested content.

1 19. The method of Claim 1 further comprising the step of identifying the users to  
2 personalize the unrequested content.

1 20. The method of Claim 19 wherein the step of identifying the users is performed by a  
2 method selected in a group consisting of:  
3 attaching cookies to web pages that are browsed by a particular user;  
4 observing the radius authentication transactions and the resulting network  
5 address assigned to the client;  
6 tracking network addresses assigned to the users; and  
7 authenticating the users.

1 21. The method of Claim 1 wherein the requested content includes a web page form, and  
2 the unrequested content includes information that automatically fills in one or more  
3 fields of said web page form.

1 22. The method of Claim 21 including the step of automatically filling in said one or more  
2 fields of said web page form upon determining that a web page being delivered  
3 through said porthole engine is associated with said web page form and is registered  
4 in the porthole engine as fillable.

1 23. The method of Claim 21 wherein the information that automatically fills in one or  
2 more fields of said web page form is provided by a database coupled to the porthole  
3 engine.

1 24. The method of Claim 1 wherein the porthole engine restricts access to particular web  
2 pages by using content filtering technology based on identities of the users.

1 25. A computer-readable medium bearing instructions for allowing a porthole engine to  
2 deliver unrequested content to users that access requested content through the porthole  
3 engine, the computer-readable medium comprising instructions for performing the  
4 steps of:

5 receiving, from a browser executing on a client, an initial request for requested  
6 content;

7 wherein said initial request is received at said porthole engine;

8 wherein said client is connected to a network through said porthole engine;

9 wherein said requested content resides on an origin server located separate  
10 from said porthole engine on said network;

11                   said porthole engine responding to said initial request by sending data to said  
12                   client that causes said requested content and said unrequested content  
13                   to appear on a display screen of said client.

1    26.    The computer-readable medium of Claim 25 wherein web page content of said  
2           requested content is modified to encapsulate said requested content within a paneled  
3           frame.

1    27.    The computer-readable medium of Claim 25 wherein web page content of said  
2           requested content is modified to reserve space in the web page to display said  
3           unrequested content.

1    28.    The computer-readable medium of Claim 27 wherein the space reserved in the web  
2           page is selected from a group consisting of:  
3                   the top of the web page;  
4                   the bottom of the web page; and  
5                   a combination of the top of the web page and the bottom of the web page.

1    29.    The computer-readable medium of Claim 25 wherein web page content of said  
2           requested content is modified to pop-up one or more display windows to display said  
3           unrequested content.

1 30. The computer-readable medium of Claim 25 wherein web page content of said  
2 requested content is modified to replace a portion of said requested content with the  
3 unrequested content.

1 31. The computer-readable medium of Claim 25 wherein:  
2 said requested content appears on a first portion of a content display region of  
3 said browser; and  
4 said unrequested content appears on a second portion of said content display  
5 region of said browser.

1 32. The computer-readable medium of Claim 25 wherein:  
2 said requested content appears on a first display window of said client; and  
3 said unrequested content appears on a second display window of said client.

1 33. The computer-readable medium of Claim 25 wherein said porthole engine determines  
2 the format in which to display said requested content and said unrequested content  
3 based on one or more factors including at least one of differences in browsers,  
4 components of requested web pages, and versions of the browsers.

1 34. The computer-readable medium of Claim 25 wherein the step of sending data to said  
2 client includes the step of:  
3 sending frame data to said client;  
4 wherein said frame data defines a plurality of frames;





2           said porthole engine determines that said initial request is not a request for an  
3           embedded item by using information contained in the URL associated  
4           with said initial request and with said second request; and  
5           the step of sending frame data is performed in response to determining that said  
6           initial request is not a request for an embedded item.

1   38.    The computer-readable medium of Claim 25 wherein the step of sending data to said  
2           client includes the step of rewriting a link in an embedded frame document to affect  
3           frame behavior.

1   39.    The computer-readable medium of Claim 38 wherein the step of rewriting a link  
2           includes the step of changing a target attribute of the link.

1   40.    The computer-readable medium of Claim 25 wherein:  
2           said porthole engine determines that said initial request is not a request for an  
3           embedded item by using information contained in the URL associated  
4           with said initial request and with said second request; and  
5           said porthole engine sends data that causes said unrequested content to appear  
6           on a portion of said content display region of said browser in response  
7           to determining that said initial request is not a request for an embedded  
8           item.

1 41. The computer-readable medium of Claim 25 further comprising instructions for  
2 performing the step of using information about a particular user to tailor the  
3 unrequested content to that particular user.

1 42. The computer-readable medium of Claim 41 wherein the information about the  
2 particular user is selected from a group consisting of:  
3 information available to owners of the porthole engine;  
4 information about the requested content; and  
5 a combination of the information available to the owners of the porthole  
6 engine and the information about the requested content.

1 43. The computer-readable medium of Claim 25 further comprising instructions for  
2 performing the step of identifying the users to personalize the unrequested content.

1 44. The computer-readable medium of Claim 43 wherein the step of identifying the users  
2 is performed by a method selected in a group consisting of:  
3 attaching cookies to web pages that are browsed by a particular user;  
4 observing the radius authentication transactions and the resulting network  
5 address assigned to the client;  
6 tracking network addresses assigned to the users; and  
7 authenticating the users.

1 45. The computer-readable medium of Claim 25 wherein the requested content includes a  
2 web page form, and the unrequested content includes information that automatically  
3 fills in one or more fields of said web page form.

1 46. The computer-readable medium of Claim 45 including instructions for performing the  
2 step of automatically filling in said one or more fields of said web page form upon  
3 determining that a web page being delivered through said porthole engine is  
4 associated with said web page form and is registered in the porthole engine as fillable.

1 47. The computer-readable medium of Claim 45 wherein the information that  
2 automatically fills in one or more fields of said web page form is provided by a  
3 database coupled to the porthole engine.

1 48. The computer-readable medium of Claim 25 wherein the porthole engine restricts  
2 access to particular web pages by using content filtering technology based on  
3 identities of the users.

1 49. A computer system comprising:  
2 a client;  
3 at least one origin server; and  
4 a porthole engine;  
5 wherein said porthole engine is operatively coupled between the client and the  
6 at least one origin server through a network;

7 wherein said porthole engine is configured to deliver unrequested content to  
8 users of said client that access requested content that resides at said at  
9 least one origin server through said porthole engine; and

10 wherein upon a user using said client to initiate an initial request for said  
11 requested content through said porthole engine:

12 said client is configured to receive, from a browser executing  
13 on said client, said initial request; and

14 said porthole engine is configured

15 to receive said initial request from said browser, and

16 to respond to said initial request by sending data to said

17 client that causes said requested content and said

18 unrequested content to appear on a display

19 screen of said client.

1 50. The system of Claim 49 wherein web page content of said requested content is  
2 modified to encapsulate said requested content within a paneled frame.

1 51. The system of Claim 49 wherein web page content of said requested content is  
2 modified to reserve space in the web page to display said unrequested content.

1 52. The system of Claim 51 wherein the space reserved in the web page is selected from a  
2 group consisting of:

3 the top of the web page;

4 the bottom of the web page; and

5 a combination of the top of the web page and the bottom of the web page.

1 53. The system of Claim 49 wherein web page content of said requested content is  
2 modified to pop-up one or more display windows to display said unrequested content.

1 54. The system of Claim 49 wherein web page content of said requested content is  
2 modified to replace a portion of said requested content with said unrequested content.

1 55. The system of Claim 49 wherein:  
2 said requested content appears on a first portion of a content display region of  
3 said browser; and  
4 said unrequested content appears on a second portion of said content display  
5 region of said browser.

1 56. The system of Claim 49 wherein:  
2 said requested content appears on a first display window of said client; and  
3 said unrequested content appears on a second display window of said client.

1 57. The system of Claim 49 wherein said porthole engine is further configured to  
2 determine the format in which to display said requested content and said unrequested  
3 content based on one or more factors including at least one of differences in browsers,  
4 components of requested web pages, and versions of the browsers.

1 58. The system of Claim 49 wherein said porthole engine is further configured to send  
2 data to said client by:  
3 sending frame data to said client;  
4 wherein said frame data defines a plurality of frames;  
5 wherein said plurality of frames includes a first frame and one or more other  
6 frames;  
7 wherein said frame data further specifies that said requested content is to be  
8 displayed in said first frame, and that said unrequested content is to be  
9 displayed in said one or more other frames.

1 59. The system of Claim 58 wherein the porthole engine is further configured:  
2 to receive a series of subsequent requests from the browser in response to the  
3 browser decoding said frame data, said series of subsequent requests  
4 including a second request for said requested content; and  
5 to respond to said second request for said requested content by requesting said  
6 requested content from said at least one origin server and delivering  
7 said requested content to said browser.

1 60. The system of Claim 59 wherein said porthole engine is further configured to  
2 determine that said second request for said requested content is not an initial request  
3 for said requested content by using information contained in the URL associated with  
4 said initial request and with said second request.

1 61. The system of Claim 58 wherein:

2           said porthole engine is further configured to determine that said initial request  
3                   is not a request for an embedded item by using information contained  
4                   in the URL associated with said initial request and with said second  
5                   request; and  
6           said porthole engine sending frame data is performed in response to  
7                   determining that said initial request is not a request for an embedded  
8                   item.

1   62.    The system of Claim 49 wherein said porthole engine is further configured:  
2                   to determine that said initial request is not a request for an embedded item by  
3                   using information contained in the URL associated with said initial  
4                   request and with said second request; and  
5                   to send data that causes said unrequested content to appear on a portion of said  
6                   content display region of said browser in response to determining that  
7                   said initial request is not a request for an embedded item.

1   63.    The system of Claim 49 wherein said porthole engine is further configured to send  
2                   data to said client to rewrite a link in an embedded frame document to affect frame  
3                   behavior.

1   64.    The system of Claim 63 wherein rewriting a link includes changing a target attribute  
2                   of the link.



1 65. The system of Claim 49 wherein said porthole engine is further configured to use  
2 information about a particular user to tailor the unrequested content to that particular  
3 user.

1 66. The system of Claim 65 wherein the information about the particular user is selected  
2 from a group consisting of:  
3 information available to owners of the porthole engine;  
4 information about the requested content; and  
5 a combination of the information available to the owners of the porthole  
6 engine and the information about the requested content.

1 67. The system of Claim 49 wherein said porthole engine is further configured to identify  
2 the users to personalize the unrequested content.

1 68. The system of Claim 67 wherein said porthole engine to configured to identify the  
2 users by a method selected from a group consisting of:  
3 attaching cookies to web pages that are browsed by a particular user;  
4 observing the radius authentication transactions and the resulting network  
5 address assigned to the client;  
6 tracking network addresses assigned to the users; and  
7 authenticating the users.

